

January 23, 2003

CERTIFIED MAIL #9059 0111

Mark Wojcik
Bakery Feeds
Building 3, Unit E
3200 Sheffield Avenue
Hammond, Indiana 46327

Re: Registered Construction and Operation Status,
089-16737-00298

Dear Mr. Wojcik:

The application from Bakery Feeds, received on November 4, 2002, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following Bakery Waste Drying and Blending Plant, to be located at 3200 Sheffield Avenue, Building 3, Unit E, Hammond Indiana, is classified as registered:

- (a) One (1) Raw Material Drying Operation including a pre-breaker mill with a maximum design capacity of 25 tons per hour, a rotary dryer (natural gas-fired only, with a capacity of 25 MMBtu/hr) a discharge box, and two material handling conveyors. (Emission Point, EP-01)

Particulate emissions from this operation are controlled by two (2) product recovery cyclones (in series) which shall be in use at all times when the process is in operation.

- (b) One (1) Dry Blending Products Receiving including an in ground hopper and a material handling conveyor with a maximum design rate of 27 tons per hour. (EP-02)

Maximum blending stock received for any given year is 12,500 tons/yr.

- (c) One (1) Dry Blending Products Storage Bin Loading including a bucket elevator, storage silo (235,000-lb capacity), and discharge screw conveyor. (EP-03)

Maximum blending stock received for any given year is 12,500 tons/yr.

- (d) One (1) Finished Product Cooler including an enclosed screw conveyor with a maximum design rate of 25 tons per hour.

- (e) One (1) Finished Product Load Out Operation including a receiving hopper and covered screw conveyor with a maximum design rate of 60 tons per hour. (EP-04)

Maximum finished product load out for any given year is 52,000 tons/yr.

- (f) One (1) Paper Separation Process including (4) Rotex screens, covered screw conveyors and a compactor with a maximum design rate of 0.75 tons per hour. (EP-05)

Particulate emissions from this process are controlled by two cyclones (in series).

This facility processes bakery wastes by grinding the material, drying it in a natural gas-fired dryer and then screening the product to assure a uniform size. Following the screening process, paper and other trash is pneumatically removed from the screen. These materials will be separated from the air stream in two cyclones and then be discharged into a trash compactor. The air stream is discharged inside the building. Finished product is then cooled and placed into the storage area. All product handling, conveying, drying, milling, and screening as well as finished product storage is conducted inside to minimize any environmental impacts. Load out of the finished product occurs on the West side of the building. Finished product is delivered by covered screw conveyors and top loaded into rail cars or tractor trailer trucks.

The following conditions shall be applicable:

326 IAC 2-6 (Emission Reporting)

This facility is subject to 326 IAC 2-6 (Emission Reporting), because the source emits more than 10 tons/yr of NOx. Pursuant to this rule, the owner/operator of this facility must annually submit an emission statement of the facility. The annual statement must be received by April 15 of each year and must contain the minimum requirements as specified in 326 IAC 2-6-4.

326 IAC 6-3-2 (c) (Particulate Emissions Limitations for Process Operations)

Pursuant to 326 IAC 6-3-2 (c) (Particulate Emissions Limitations for Process Operations), the PM emissions from this process shall not exceed the following allowable rates based on the Process Weight Rate table in the rule:

Raw Material Drying, 35.43 lbs/hr;
Dry Blending Products Receiving, 37.31 lbs/hr;
Dry Blanding Products Storage Bin Loading, 37.31 lbs/hr; and
Finished Product Load Out Operation, 46.3 lbs/hr.

However, since no controls are needed to meet any of these allowable rates, the Hammond Air Quality Control Ordinance No. 3522 (as amended) will limit the process emissions to the following emissions after controls which will be within the standards set by the rule:

Raw Material Drying, 4.92 lbs/hr;
Dry Blending Products Receiving, 1.62 lbs/hr;
Dry Blanding Products Storage Bin Loading, 0.54 lbs/hr; and
Finished Product Load Out Operation, 0.66 lbs/hr.

Also, special conditions will require the operation of control equipment at all times when the process is in operation.

This registration is a new registration issued to this existing source. The source may operate according to 326 IAC 2-5.5.

An authorized individual shall provide an annual notice to the Office of Air Quality that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.5-4(a)(3). The annual notice shall be submitted to:

Compliance Data Section
Office of Air Quality and
100 North Senate Avenue
Indianapolis, IN 46206-6015

Hammond Department of Environmental
Management
Air Pollution Control Division
5925 Calumet Avenue
Hammond, Indiana 46320

no later than March 1 of each year, with the annual notice being submitted in the format attached.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Ronald Novak, Director
Hammond Department of Environmental Management

KM

cc: Permits Administrator – Mindy Hahn

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| Registration Annual Notification |
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This form should be used to comply with the notification requirements under 326 IAC 2-5.5-4(a)(3).

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|--|
| Company Name: Bakery Feeds |
| Address: 3200 Sheffield Avenue, Building 3, Unit E |
| City: Hammond |
| Authorized Individual: Mark Wojcik |
| Phone #: (219) 853-9700 |
| Registration #: 089-16737-00298 |

I hereby certify that Bakery Feeds is still in operation and is in compliance with the requirements of Registration 089-16737-00298.

| |
|---------------------------|
| Name (typed): Mark Wojcik |
| Title: General Manager |
| Signature: |
| Date: |

**Indiana Department of Environmental Management
Office of Air Quality
and
Hammond Department of Environmental Management
Air Pollution Control Division**

Technical Support Document (TSD) for a Registration

Source Background and Description

Source Name: Bakery Feeds
Source Location: 3200 Sheffield Avenue, Hammond, Indiana 46327
County: Lake
SIC Code: 2048 – Prepared Feeds, NEC
Operation Permit No.: 089-16737-00298
Permit Reviewer: Kristina Massey

The Hammond Department of Environmental Management (HDEM) has reviewed an application from Bakery Feeds relating to the construction and operation of a Bakery Waste Drying and Blending Plant, consisting of the following equipment:

- (a) One (1) Raw Material Drying Operation including a pre-breaker mill with a maximum design capacity of 25 tons per hour, a rotary dryer (natural gas-fired only, with a capacity of 25 MMBtu/hr) a discharge box, and two material handling conveyors. (Emission Point, EP-01)

Particulate emissions from this operation are controlled by two (2) product recovery cyclones (in series) which shall be in use at all times when the process is in operation.

- (b) One (1) Dry Blending Products Receiving including an in ground hopper and a material handling conveyor with a maximum design rate of 27 tons per hour. (EP-02)

Maximum blending stock received for any given year is 27,000 tons/yr.

- (c) One (1) Dry Blending Products Storage Bin Loading including a bucket elevator, storage silo (235,000-lb capacity), and discharge screw conveyor. (EP-03)

Maximum blending stock received for any given year is 27,000 tons/yr.

- (d) One (1) Finished Product Cooler including an enclosed screw conveyor with a maximum design rate of 25 tons per hour.

- (e) One (1) Finished Product Load Out Operation including a receiving hopper and covered screw conveyor with a maximum design rate of 60 tons per hour. (EP-04)

Maximum finished product load out for any given year is 120,000 tons/yr.

- (f) One (1) Paper Separation Process including (4) Rotex screens, covered screw conveyors and a compactor with a maximum design rate of 0.75 tons per hour. (EP-05)

Particulate emissions from this process are controlled by two cyclones (in series).

This facility processes bakery wastes by grinding the material, drying it in a natural gas-fired dryer and then screening the product to assure a uniform size. Following the screening process, paper and other trash is pneumatically removed from the screen. These materials will be separated from the air stream in two cyclones and then be discharged into a trash compactor. The air stream is discharged inside the building. Finished product is then cooled and placed into the storage area. All product handling, conveying, drying, milling, and screening as well as finished product storage is conducted inside to minimize any environmental impacts. Load out of the finished product occurs on the West side of the building. Finished product is delivered by covered screw conveyors and top loaded into rail cars or tractor trailer trucks.

PROCESS DESCRIPTION

- Step #1: Waste bakery products consisting of cookies, crackers, cereals, breads, snack foods, dough, and the like are brought into the plant by tractor trailers and are off-loaded using an external truck dumper and deposited via belt conveyor in piles on the floor inside the building. Raw materials are then blended and fed into the process equipment (EP-02) using mobile equipment. Blending stock is brought into the plant by tractor trailers and is off-loaded inside the building into an in-ground hopper (EP-03). From the hopper material is conveyed via an incline screw conveyor to a bucket elevator and finally to an outside storage silo (EP-04). Maximum blending stock received for any given year is 12,500 tons/yr.
- Step #2: A pre-breaker mill first reduces the size of the materials to assure a uniform drying of the product. This mill has no exhaust system and any stray particulates generated are released inside the building. Due to the nature of the products, these particulates tend to be rather large sized particulates with a high moisture content which drop quickly to the floor. No fugitive emissions will be generated by this operation. The maximum design rate of this pre-breaker mill is 50,000 lbs/hr; 25 tons/hr.
- Step #3: Raw materials are moved from the hammermill by conveyor to a 10 foot diameter by 50 foot long rotating drum dryer. The dryer will reduce the moisture content of the raw materials from around 30% to about 8%. Heat for the dryer is supplied by a natural gas burner. The dryer heat input is 25 MMBtu/hr.
- Step #4: Product is moved through the dryer by both tumbling action and by a moving air stream. At the discharge end of the dryer product will fall into a drop box where it is removed by screw conveyor. A 45,000 cfm fan will pull air through the dryer, the drop box and the two (2) cyclones (in series) which are rated at a 97% and 14% efficiency, respectively and are to be considered as an integral part of the process. Product not removed in the drop box is collected by the cyclones and put back into the process by covered screw conveyor. Following the fan, all air is discharged through a 100-foot stack (EP-01).
- Step #5: Product is moved from the drop box by a covered screw conveyor to a vibrating screen, which sizes the product. Finished product passing through the screen is moved by covered screw conveyor to an enclosed cooling screw. Scrap paper/package which is brought in with the raw materials will be pneumatically removed from the screen and separated from the air stream in two (2) cyclones (in series) the first being rated at a 99.9% control efficiency, the second rated at 99.0%. This material is discharged from the second cyclone directly into a compactor. Air used to pneumatically move the scrap paper/package is discharged inside the building (EP-05). There are no fugitive emissions. The maximum design rate of this paper separation process is 1,500 lbs/hr; 0.75 tons/hr.

- Step #6: Product which cannot pass through the screen is further processed through a regrind mill to reduce its size. This mill is also located inside the building and has no exhaust system. After passing through the hammermill the product is returned to the screen by covered screw conveyors. This cycle continues until all of the product passes through the screen and is placed into storage. As with the first hammermill, particulate emissions tend to be rather large sized particles with a high moisture content which will drop quickly to the floor and not remain airborne.
- Step #7: Product is moved from the screening operation to a product cooler before going into storage. The cooler consists of an enclosed 24 inch by 24 foot long screw conveyor. As the product tumbles through the cooler, ambient air and a fine water mist will be used to remove latent heat from the product. Exhaust air from the cooler is discharged inside the building. The maximum design rate of this finished product cooler is 50,000 lbs/hr; 25 tons/hr.
- Step #8: Product is moved from the product cooler by enclosed screw conveyors to the storage area. This area is located inside the building and the product is stored in piles on the floor. Finished product is moved from the storage area by mobile equipment and placed into a receiving hopper. A covered screw conveyor will then transport the product outside the building to the loading area where it is loaded onto rail cars/trucks for delivery to customers. The loading chute is fitted with flexible downspouts to minimize fugitive emissions. This process has been identified as a potential emission point (EP-04). Maximum finished product load out for any given year is 120,000 tons/yr.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices (EP.01 – EP.05):

Waste bakery products such as cookies, crackers, cereals, and breads are brought into the plant and processed by grinding the material, drying it in a natural gas-fired dryer (maximum design capacity of 25 MMBtu/hr) and then screening the product to assure a uniform size. Paper and other trash is pneumatically removed from the screen and separated from the air stream in two cyclones (in series) rated at a 99.9% and 99% control efficiency, respectively and then discharged into a trash compactor for disposal. Finished product is cooled, placed into storage and eventually delivered by covered screw conveyor into rail cars or tractor trailer trucks (top loaded). This process also includes a Housekeeping Dust Collection System that vents inside.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

- (a) OP 02093, issued on March 7, 2002 and modified on June 3, 2002.

All conditions from previous approvals were incorporated into this permit.

Air Pollution Control Justification as an Integral Part of the Process

The company has submitted the following justifications such that the two (2) product recovery cyclones be considered as an integral part of the Raw Material Drying Operation which consists of a pre-breaker mill, rotary dryer and discharge box:

- (a) The primary purpose of the two (2) product recovery cyclones is not to control air pollution. The product recovery cyclones are installed to recover product, which is pneumatically carried through the rotary dryer by the heated air stream induced by the dryer exhaust fan. When the product exits the dryer it is separated from the air stream in the drop box and the product recovery cyclones.

The HDEM has evaluated the justifications and agreed that the two (2) product recovery cyclones are considered as an integral part of the Raw Material Drying Operation. Therefore, the permitting level is determined using the potential emissions after the two product recovery cyclones. Operating conditions are specified in the proposed permit that the two (2) product recovery cyclones shall operate at all times when the Raw Material Drying Operation is in use.

Stack Summary

| Stack ID | Operation | Height (feet) | Diameter (feet) | Flow Rate (acfm) | Temperature (°F) |
|----------|--------------|---------------|-----------------|------------------|------------------|
| EP-01 | Rotary Dryer | 100 | 3.83 | 45,000 | 220 |

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on November 4, 2002.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (five (5) pages).

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.”

| Pollutant | Potential To Emit (tons/year) |
|-----------------|-------------------------------|
| PM | 28.37 |
| PM-10 | 26.76 |
| SO ₂ | 0.06 |
| VOC | 0.56 |
| CO | 8.52 |
| NO _x | 14.19 |

Potential to emit is the potential after controls because the product recovery cyclones (associated with the Raw Materials Drying Operation), which are located downstream of the rotary dryer, are an integral part of the recycling process.

The potential to emit (as defined in 326 IAC 2-7-1(29)) of all criteria pollutants is less than 100 tons per year and less than 25 tons per year of VOC in Lake County. Therefore, the source is not subject to the provisions of 326 IAC 2-7. The Particulate Matter (PM) and Particulate Matter less than 10 microns (PM-10) have a potential to emit greater than five (5) tons per year and less than twenty-five (25) tons per year, and Oxides of Nitrogen (NO_x) have a potential greater than ten (10) tons per year and less than twenty-five (25) tons per year therefore, it is subject to 326 IAC 2-5 – Registration

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 2001 HDEM information.

| Pollutant | Actual Emissions (tons/year) |
|-----------------|------------------------------|
| PM | 5.57 |
| PM-10 | 5.00 |
| SO ₂ | 0.01 |
| VOC | 0.05 |
| CO | 0.69 |
| NO _x | 1.15 |
| HAP (specify) | 0 |

County Attainment Status

The source is located in Lake County.

| Pollutant | Status |
|-----------------|---------------------------|
| PM-10 | Moderate nonattainment |
| SO ₂ | Primary nonattainment |
| NO ₂ | Attainment/unclassifiable |
| Ozone | Severe nonattainment |
| CO | Attainment/unclassifiable |
| Lead | Attainment/unclassifiable |

Lake County has been classified as attainment or unclassifiable for NO₂, CO and Lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Lake County has been designated as nonattainment for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.

Lake County has been classified as nonattainment for PM-10. Therefore, these emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.

Source Status

Existing Source PSD, Part 70 or FESOP Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

| Pollutant | Emissions (ton/yr) |
|-----------------|-----------------------|
| PM | 24.08 |
| PM10 | 22.79 |
| SO ₂ | 0.06 |
| VOC | 0.56 |
| CO | 8.52 |
| NO _x | 14.19 |

This existing source is **not** a major stationary source because no nonattainment regulated pollutant is emitted at a rate of 100 tons per year, and it is not in one of the 28 listed source categories.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source, including the emissions from this permit, is still not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
- (c) any combination of HAPs is less than 25 tons/year.

This status is based on all the air approvals issued to the source. This status has been verified by the HDEM.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This facility is subject to 326 IAC 2-6 (Emission Reporting), because the source emits more than 10 tons/yr of NO_x. Pursuant to this rule, the owner/operator of this facility must annually submit an emission statement of the facility. The annual statement must be received by April 15 of each year and must contain the minimum requirements as specified in 326 IAC 2-6-4.

326 IAC 6-3-2 (c) (Particulate Emissions Limitations for Process Operations)

Pursuant to 326 IAC 6-3-2 (c) (Particulate Emissions Limitations for Process Operations), the PM emissions from this process shall not exceed the following allowable rates based on the Process Weight Rate table in the rule:

Raw Material Drying, 35.43 lbs/hr;
Dry Blending Products Receiving, 37.31 lbs/hr;
Dry Blanding Products Storage Bin Loading, 37.31 lbs/hr; and
Finished Product Load Out Operation, 46.3 lbs/hr.

However, since no controls are needed to meet any of these allowable rates, the Hammond Air Quality Control Ordinance No. 3522 (as amended) will limit the process emissions to the following emissions after controls which will be within the standards set by the rule:

Raw Material Drying, 4.92 lbs/hr;
Dry Blending Products Receiving, 1.62 lbs/hr;
Dry Blanding Products Storage Bin Loading, 0.54 lbs/hr; and

Finished Product Load Out Operation, 0.66 lbs/hr.

Also, special conditions will require the operation of control equipment at all times when the process is in operation.

Conclusion

The operation of this Bakery Waste Drying and Blending Plant shall be subject to the conditions of the attached proposed Registration (R089-16737-00298) and Local Operation Permit.

ALABAMA POWER LAW (CDS)/EIS CALCULATIONS

Bakery Feeds

3200 Sheffield Avenue
Hammond, Indiana 46325

PLANT ID NO: 00298
INSP DATE:
CALC DATE: 4/17/02

CALCULATIONS BY: Kristina Massey

YEAR OF DATA: **2001**

NO. OF POINTS: 1
NO. OF SEGMENTS: 6

NOTES

EF: EMISSION FACTOR
CE: CONTROL EFFICIENCY

MDR: MAXIMUM DESIGN RATE
MDC: MAXIMUM DESIGN CAPACITY

Ts: STACK DISCHARGE TEMPERATURE
UNITS FOR EMISSIONS ARE IN (TPY) EXCEPT WHERE GIVEN

POINT ID NO. 1 (Segment 01)

Raw Material Drying Operation

(prebreaker mill, rotary dryer, discharge box
and two material handling conveyors)

(Process)

MDR (T/hr): 25
YEARLY PROD (T/yr): 48137

STACK ID (DIAM:HEIGHT): (3.83' : 100')
FLOWRATE (ACFM): 45,000
Ts(°F): 220

CNTRL DEV: 1 Recovery cyclone 97% C.E.

PERMITTED OPERATING HRS: **8760** hr/yr

2 Recovery cyclone 14% C.E.

(E.F. - See Below)

| POLLUTANT | EF(LB/T) | CE (%) | POTENTIAL EMISSIONS | | | | | | ALLOWABLE | | COMPANY ACTUAL | |
|-----------|----------|--------|---------------------|-----------|-------|----------------|--------------|-----------|-------------|--------------|-----------------|----------------|
| | | | BEFORE CONTROLS | | | AFTER CONTROLS | | | (lbs/hr) | (TPY) | BEFORE CONTROLS | AFTER CONTROLS |
| | | | (lbs/hr) | (lbs/day) | (TPY) | (lbs/hr) | (TPY) | (gr/dscf) | | | | |
| PM | 0.229 | 0.14 | 5.73 | 137.40 | 25.08 | 4.92 | 21.56 | 0.02 | 4.92 | 21.56 | 5.51 | 4.74 |
| PM10 | 0.229 | 0.14 | 5.73 | 137.40 | 25.08 | 4.92 | 21.56 | 0.02 | 4.92 | 21.56 | 5.51 | 4.74 |
| SOx | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N/A | 0.00 | 0.00 | 0.00 | 0.00 |
| NOx | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N/A | 0.00 | 0.00 | 0.00 | 0.00 |
| VOC | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N/A | 0.00 | 0.00 | 0.00 | 0.00 |
| CO | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N/A | 0.00 | 0.00 | 0.00 | 0.00 |
| LEAD | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N/A | 0.00 | 0.00 | 0.00 | 0.00 |

(PM) E.F. = 0.229 lb/ton from a stack test performed at the Bakery Feeds Incorporated facility located in Fayetteville, Arkansas (12/14/94).

PM & PM10:
Hammond Air Quality Control Ordinance No. 3522
(as amended)

Average particulate emissions quantified from the three test runs was 3.2704 lbs/hr; @ 14.274 T/hr = 0.229 lb/ton.

1st Product recovery cyclone: 3% inefficiency X 97% efficiency.

2nd Product recovery cyclone: 70% removal of 20% of the particles.

Product recovery cyclones, which are located downstream of the rotary dryer, are an integral part of the recycling process. Therefore, the potential to emit is the potential after controls.

PM10 emissions shall be set equal to the PM emissions limit.

POINT ID NO. 1 (Segment 02)

Rotary Dryer

(Natural Gas Combustion only)

CNTRL DEV: NONE

MDC (mmBtu/hr): 25
MDR (mmcf/hr): 0.0231

HEAT CONTENT (Btu/cft): 1,080
QTY BURNED (mmcf/yr): 16.467

STACK ID (DIAM:HEIGHT): 3.83 : 100
FLOWRATE (ACFM): 45,000
Ts(°F): 220

PERMITTED OPERATING HRS: **8760** hr/yr

(EP-01)

| SCC NO. 1-02-006-02 | | | POTENTIAL EMISSIONS | | | | | | ALLOWABLE | | COMPANY ACTUAL | |
|---------------------|--------------|--------|---------------------|-----------|--------------|----------------|-------|-----------|-------------|--------------|-----------------|----------------|
| POLLUTANT | EF(lbs/mmcf) | CE (%) | BEFORE CONTROLS | | | AFTER CONTROLS | | | (lbs/hr) | (TPY) | BEFORE CONTROLS | AFTER CONTROLS |
| | | | (lbs/hr) | (lbs/day) | (TPY) | (lbs/hr) | (TPY) | (gr/dscf) | | | | |
| PM | 7.6 | 0 | 0.18 | 4.22 | 0.77 | 0.18 | 0.77 | 0.00 | 0.18 | 0.77 | 0.06 | 0.06 |
| PM10 | 7.6 | 0 | 0.18 | 4.22 | 0.77 | 0.18 | 0.77 | 0.00 | 0.18 | 0.77 | 0.06 | 0.06 |
| SOx | 0.6 | 0 | 0.01 | 0.33 | 0.06 | 0.01 | 0.06 | N/A | 0.01 | 0.06 | 0.00 | 0.00 |
| NOx | 140 | 0 | 3.24 | 77.78 | 14.19 | 3.24 | 14.19 | N/A | 3.24 | 14.19 | 1.15 | 1.15 |
| VOC | 5.5 | 0 | 0.13 | 3.06 | 0.56 | 0.13 | 0.56 | N/A | 0.13 | 0.56 | 0.05 | 0.05 |
| CO | 84 | 0 | 1.94 | 46.67 | 8.52 | 1.94 | 8.52 | N/A | 1.94 | 8.52 | 0.69 | 0.69 |
| LEAD | 0.0005 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N/A | 0.00 | 0.00 | 0.00 | 0.00 |

Emission Factors from USEPA AP-42 (3/98 version), Section 1.4 Natural Gas Combustion, Table 1.4-1 and Table 1.4-2.

SOx, NOx, VOC, CO, and LEAD:
Hammond Air Quality Control Ordinance No. 3522
(as amended)

Raw Material Drying Operation Totals

| POTENTIAL EMISSIONS | | | | ALLOWABLE | | | | | COMPANY ACTUAL | |
|---------------------|----------|-----------|-------|----------------|-------|-----------|----------|-------|----------------|----------|
| BEFORE CONTROLS | | | | AFTER CONTROLS | | | | | BEFORE | AFTER |
| POLLUTANT | (lbs/hr) | (lbs/day) | (TPY) | (lbs/hr) | (TPY) | (gr/dscf) | (lbs/hr) | (TPY) | CONTROLS | CONTROLS |
| PM | 5.90 | 141.62 | 25.85 | 5.10 | 22.34 | 0.02 | 5.10 | 22.34 | 5.57 | 4.80 |
| PM10 | 5.90 | 141.62 | 25.85 | 5.10 | 22.34 | 0.02 | 5.10 | 22.34 | 5.57 | 4.80 |
| SOx | 0.01 | 0.33 | 0.06 | 0.01 | 0.06 | #VALUE! | 0.01 | 0.06 | 0.00 | 0.00 |
| NOx | 3.24 | 77.78 | 14.19 | 3.24 | 14.19 | #VALUE! | 3.24 | 14.19 | 1.15 | 1.15 |
| VOC | 0.13 | 3.06 | 0.56 | 0.13 | 0.56 | #VALUE! | 0.13 | 0.56 | 0.05 | 0.05 |
| CO | 1.94 | 46.67 | 8.52 | 1.94 | 8.52 | #VALUE! | 1.94 | 8.52 | 0.69 | 0.69 |
| LEAD | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | #VALUE! | 0.00 | 0.00 | 0.00 | 0.00 |

PM, PM10, SOx, NOx, VOC, CO, and LEAD:
Hammond Air Quality Control Ordinance No. 3522
(as amended)

Product recovery cyclones, which are located downstream of the rotary dryer, are an integral part of the recycling process.
Therefore, the potential to emit is the potential after controls.

POINT ID NO. 1 (Segment 03)

Dry Blending Products Receiving

(w/in ground hopper and
material handling conveyor)

CNTRL DEV: NONE

MDR (T/hr): 27
YEARLY PROD (T/yr): 11831

27000

STACK ID (DIAM:HEIGHT): No Stack
FLOWRATE (ACFM): N/A
Ts(°F): N/A

(EP-02)

| E.F. AP-42 | | | PERMITTED OPERATING HRS: 8760 hr/yr | | | | | | ALLOWABLE | | COMPANY ACTUAL | |
|------------|----------|--------|--|-----------|-------------|----------------|-------|-----------|-------------|-------------|-----------------|----------------|
| | | | POTENTIAL EMISSIONS | | | | | | | | | |
| | | | BEFORE CONTROLS | | | AFTER CONTROLS | | | | | BEFORE CONTROLS | AFTER CONTROLS |
| POLLUTANT | EF(LB/T) | CE (%) | (lbs/hr) | (lbs/day) | (TPY) | (lbs/hr) | (TPY) | (gr/dscf) | (lbs/hr) | (TPY) | | |
| PM | 0.060 | 0 | 1.62 | 38.88 | 0.81 | 1.62 | 0.81 | #VALUE! | 1.62 | 0.81 | 0.35 | 0.35 |
| PM10 | 0.015 | 0 | 0.41 | 9.72 | 0.20 | 0.41 | 0.20 | #VALUE! | 0.41 | 0.20 | 0.09 | 0.09 |
| SOx | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N/A | 0.00 | 0.00 | 0.00 | 0.00 |
| NOx | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N/A | 0.00 | 0.00 | 0.00 | 0.00 |
| VOC | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N/A | 0.00 | 0.00 | 0.00 | 0.00 |
| CO | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N/A | 0.00 | 0.00 | 0.00 | 0.00 |
| LEAD | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N/A | 0.00 | 0.00 | 0.00 | 0.00 |

PM & PM10:

Hammond Air Quality Control Ordinance No. 3522

(as amended)

Emission factors obtained from Table 9.9.1-2 of the AP-42 Interim Section 9.9.1 Grain Elevators and Processes (dated 11/95).

(PM) E.F. = 0.060 lb/ton * 1.00 = 0.060 lb/ton

(PM10) E.F. = 0.015 lb/ton * 1.00 = 0.015 lb/ton

Emission Factor is multiplied by the Dustiness Ratio (DR1) = 1.00

Per the Company, maximum blending stock received for any given year = 27,000 T/yr.

POINT ID NO. 1 (Segment 04)

Dry Blending Products Storage Bin Loading

(w/bucket elevator, storage silo,
and discharge screw conveyor)

CNTRL DEV: NONE

MDR (T/hr): 27
YEARLY PROD (T/yr): 11831

27000

STACK ID (DIAM:HEIGHT):
FLOWRATE (ACFM): N/A
Ts(°F): N/A

(EP-03)

| E.F. AP-42 | | | PERMITTED OPERATING HRS: 8760 hr/yr | | | | | | ALLOWABLE | | COMPANY ACTUAL | |
|------------|----------|--------|--|-----------|-------------|----------------|-------|-----------|-------------|-------------|-----------------|----------------|
| | | | POTENTIAL EMISSIONS | | | | | | | | | |
| | | | BEFORE CONTROLS | | | AFTER CONTROLS | | | | | BEFORE CONTROLS | AFTER CONTROLS |
| POLLUTANT | EF(LB/T) | CE (%) | (lbs/hr) | (lbs/day) | (TPY) | (lbs/hr) | (TPY) | (gr/dscf) | (lbs/hr) | (TPY) | | |
| PM | 0.020 | 0 | 0.54 | 12.96 | 0.27 | 0.54 | 0.27 | #VALUE! | 0.54 | 0.27 | 0.12 | 0.12 |
| PM10 | 0.005 | 0 | 0.14 | 3.24 | 0.07 | 0.14 | 0.07 | #VALUE! | 0.14 | 0.07 | 0.03 | 0.03 |
| SOx | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N/A | 0.00 | 0.00 | 0.00 | 0.00 |
| NOx | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N/A | 0.00 | 0.00 | 0.00 | 0.00 |
| VOC | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N/A | 0.00 | 0.00 | 0.00 | 0.00 |
| CO | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N/A | 0.00 | 0.00 | 0.00 | 0.00 |
| LEAD | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N/A | 0.00 | 0.00 | 0.00 | 0.00 |

PM & PM10:

Hammond Air Quality Control Ordinance No. 3522

(as amended)

Emission factors obtained from Table 9.9.1-2 of the AP-42 Interim Section 9.9.1 Grain Elevators and Processes (dated 11/95).

(PM) E.F. = 0.020 lb/ton * 1.00 = 0.020 lb/ton

(PM10) E.F. = 0.005 lb/ton * 1.00 = 0.005 lb/ton

Emission Factor is multiplied by the Dustiness Ratio (DR1) = 1.00

Per the Company, maximum blending stock received for any given year = 27,000 T/yr.

POINT ID NO. 1 (Segment 05)**Finished Product Load Out Operation**

(w/receiving hopper & covered screw conveyor)

CNTRL DEV: NONE

MDR (T/hr): 60

YEARLY PROD (T/yr): 54167

120000

STACK ID (DIAM:HEIGHT): No Stack

FLOWRATE (ACFM): N/A

Ts(°F): N/A

(EP-04)PERMITTED OPERATING HRS: **8760** hr/yr

| E.F. AP-42 | | | POTENTIAL EMISSIONS | | | | | | ALLOWABLE | | COMPANY ACTUAL | |
|------------|----------|--------|---------------------|-----------|-------------|----------------|-------|-----------|-------------|-------------|-----------------|----------------|
| POLLUTANT | EF(LB/T) | CE (%) | BEFORE CONTROLS | | | AFTER CONTROLS | | | (lbs/hr) | (TPY) | BEFORE CONTROLS | AFTER CONTROLS |
| | | | (lbs/hr) | (lbs/day) | (TPY) | (lbs/hr) | (TPY) | (gr/dscf) | | | | |
| PM | 0.011 | 0 | 0.66 | 15.84 | 0.66 | 0.66 | 0.66 | #VALUE! | 0.66 | 0.66 | 0.30 | 0.30 |
| PM10 | 0.003 | 0 | 0.18 | 4.32 | 0.18 | 0.18 | 0.18 | #VALUE! | 0.18 | 0.18 | 0.08 | 0.08 |
| SOx | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N/A | 0.00 | 0.00 | 0.00 | 0.00 |
| NOx | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N/A | 0.00 | 0.00 | 0.00 | 0.00 |
| VOC | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N/A | 0.00 | 0.00 | 0.00 | 0.00 |
| CO | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N/A | 0.00 | 0.00 | 0.00 | 0.00 |
| LEAD | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N/A | 0.00 | 0.00 | 0.00 | 0.00 |

PM & PM10:

Hammond Air Quality Control Ordinance No. 3522

(as amended)

Emission factors obtained from Table 9.9.1-2 of the AP-42 Interim Section 9.9.1 Grain Elevators and Processes (dated 11/95).

E.F. = 0.011 lb/ton * 1.00 = 0.011 lb/ton

E.F. = 0.003 lb/ton * 1.00 = 0.003 lb/ton

Emission Factor is multiplied by the Dustiness Ratio (DR1) = 1.00

Per the Company, maximum finished product load out for any given year = 120,000 T/yr.

POINT ID NO. 1 (Segment 06)**Paper Separation Process**

(including (4) Rotex screens, covered screw conveyors and a compactor)

CNTRL DEV: Paper Cyclone #1 - 99.9%

Paper Cyclone #2 - 99.0% (in series)

SCC NO. 3-05-011-07

MDR (T/hr): 0.75

YEARLY PROD (T/yr): 1446

STACK ID (DIAM:HEIGHT): ?

FLOWRATE (ACFM): 10,000

Ts(°F): 98

(EP-05)PERMITTED OPERATING HRS: **8760** hr/yr

| E.F. AP-42 | | | POTENTIAL EMISSIONS | | | | | | ALLOWABLE | | COMPANY ACTUAL | |
|------------|----------|---------|---------------------|-----------|-------------|----------------|-------|-----------|-----------|-------|-----------------|----------------|
| POLLUTANT | EF(LB/T) | CE (%) | BEFORE CONTROLS | | | AFTER CONTROLS | | | (lbs/hr) | (TPY) | BEFORE CONTROLS | AFTER CONTROLS |
| | | | (lbs/hr) | (lbs/day) | (TPY) | (lbs/hr) | (TPY) | (gr/dscf) | | | | |
| PM | 0.24 | 0.99999 | 0.18 | 4.32 | 0.79 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.17 | 0.00 |
| PM10 | 0.14 | 0.99999 | 0.11 | 2.52 | 0.46 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.10 | 0.00 |
| SOx | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N/A | 0.00 | 0.00 | 0.00 | 0.00 |
| NOx | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N/A | 0.00 | 0.00 | 0.00 | 0.00 |
| VOC | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N/A | 0.00 | 0.00 | 0.00 | 0.00 |
| CO | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N/A | 0.00 | 0.00 | 0.00 | 0.00 |
| LEAD | 0 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N/A | 0.00 | 0.00 | 0.00 | 0.00 |

E.F. used is for concrete batching because there are no E.F.s for this type of operation.

This is very conservative in that the material handled is mostly paper bag with a little amount of product.

PM & PM10:

Hammond Air Quality Control Ordinance No. 3522

(as amended)

MDR based on 3% of product from total weight of paper/packaging received.

MDR = 50,000 lbs/hr * 0.97 = 48,500 lbs/hr

50,000 lbs/hr - 48,500 lbs/hr = 1,500 lbs/hr

1,500 lbs/hr / 2000 lbs/T = 0.75 T/hr

| Total Emissions | | | | | | | | | | | | | |
|-----------------|---------------------|-----------|-------|----------------|-------|-----------|-----------|-------|-----------------|----------------|--|--|--|
| POLLUTANT | POTENTIAL EMISSIONS | | | | | | ALLOWABLE | | COMPANY ACTUAL | | | | |
| | BEFORE CONTROLS | | | AFTER CONTROLS | | | | | BEFORE CONTROLS | AFTER CONTROLS | | | |
| | (lbs/hr) | (lbs/day) | (TPY) | (lbs/hr) | (TPY) | (gr/dscf) | (lbs/hr) | (TPY) | | | | | |
| PM | 8.90 | 213.62 | 28.37 | 7.92 | 24.08 | #VALUE! | 7.92 | 24.08 | 6.52 | 5.57 | | | |
| PM10 | 6.73 | 161.42 | 26.76 | 5.82 | 22.79 | #VALUE! | 5.82 | 22.79 | 5.88 | 5.00 | | | |
| SOx | 0.01 | 0.33 | 0.06 | 0.01 | 0.06 | #VALUE! | 0.01 | 0.06 | 0.00 | 0.00 | | | |
| NOx | 3.24 | 77.78 | 14.19 | 3.24 | 14.19 | #VALUE! | 3.24 | 14.19 | 1.15 | 1.15 | | | |
| VOC | 0.13 | 3.06 | 0.56 | 0.13 | 0.56 | #VALUE! | 0.13 | 0.56 | 0.05 | 0.05 | | | |
| CO | 1.94 | 46.67 | 8.52 | 1.94 | 8.52 | #VALUE! | 1.94 | 8.52 | 0.69 | 0.69 | | | |
| LEAD | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | #VALUE! | 0.00 | 0.00 | 0.00 | 0.00 | | | |

*This source is classed "Registered" according to potential PM & PM10 emissions.

PM, PM10, SOx, NOx, VOC, CO, and LEAD:
Hammond Air Quality Control Ordinance No. 3522
(as amended)

Potential to emit is the potential after controls because the product recovery cyclones (associated with the Raw Material Drying Operation), which are located downstream of the rotary dryer, are an integral part of the recycling process.